VOL. 523 JOURNAL OF CHROMATOGRAPHY DECEMBER 7, 1990

CONTENTS

(Abstracts/Contents Lists published in Analytical Abstracts, Biochemical Abstracts, Biological Abstracts, Chemical Abstracts, Chemical Titles, Chromatography Abstracts, Current Contents/Life Sciences, Current Contents/Physical, Chemical & Earth Sciences, Deep-Sea Research/Part B: Oceanographic Literature Review, Excerpta Medica, Index Medicus, Mass Spectrometry Bulletin, PASCAL-CNRS, Referativnyi Zhurnal, Research Alert and Science Citation Index)

7TH INTERNATIONAL SYMPOSIUM ON PREPARATIVE CHROMATOGRAPHY, GHENT, APRIL 8–11, 1990

Dependence of the production rate on the relative retention of two components in preparative chromatography
by S. Golshan-Shirazi and G. Guiochon (Oak Ridge, TN, U.S.A.) 1

Frontal chromatographic techniques in preparative chromatography
by D. A. Hill, P. Mace and D. Moore (Dartford, U.K.) 11

Packing of preparative high-performance liquid chromatography columns by sedimentation
by T. Wang and R. A. Hartwick (Binghamton, NY, U.S.A.), N. T. Miller (Conshohocken, PA, U.S.A.) and D. C. Shelly (Lubbock, TX, U.S.A.) 23

Silica–dextran sorbent composites and their cleaning in place
by E. Boschetti, P. Girot and L. Guerrier (Villeneuve la Garenne, France) 35

Forced-flow multi-phase liquid extraction, a separation method based on relative and absolute counter-current distribution. I. Description of the method and basic possibilities
by Sz. Nyiredy, L. Botz and O. Sticher (Zürich, Switzerland) 43

Improved methods for the purification of enzymes of the folate pathway in *Escherichia coli*. I. Chromatographic methods
by R. Bartels and L. Bock (Borstel, F.R.G.) 53

(end of symposium papers)

Utility of the displacement effect in the routine optimization of separations by preparative liquid chromatography
by J. Newburger (Princeton, NJ, U.S.A.) and G. Guiochon (Oak Ridge, TN, U.S.A.) (Received June 8th, 1990) 63

Computer simulation for optimization of high-performance liquid chromatography of some phenolic pollutants
by W. Markowski, T. H. Dzido and E. Soczewiński (Lublin, Poland) (Received August 1st, 1990) 81

Chromatographic investigations of macromolecules in the "critical range" of liquid chromatography. I. Functionality type and composition distribution in polyethylene oxide and polypropylene oxide copolymers
by A. V. Gorshkov (Moscow, U.S.S.R.), H. Much, H. Becker and H. Pasch (Berlin, G.D.R.) and V. V. Evreinov and S. G. Entelis (Moscow, U.S.S.R.) (Received July 16th, 1990) . . 91

Investigation of affinity partition chromatography using formate dehydrogenase as a model
by A. Walsdorf (Jülich, F.R.G.), D. Forciniti (Raleigh, NC, U.S.A.) and M. R. Kula (Jülich, F.R.G.) (Received August 7th, 1990) 103

Combination of polymer-bound charged groups and affinity ligands for extraction of enzymes by partitioning in aqueous two-phase systems
by L. Cheng, M. Joelsson and G. Johansson (Lund, Sweden) (Received July 31st, 1990) . 119

(Continued overleaf)

Contents (continued)

Hydrophobic interaction chromatography of proteins on Separon HEMA. II. Influence of sorbent modification on efficiency of separation
by P. Šmídl, I. Kleinmann, J. Plicka and V. Svoboda (Prague, Czechoslovakia) (Received July 23rd, 1990) 131

Hydrophobic interaction chromatography of proteins on Separon HEMA. III. Selection of suitable gradient conditions for the separation of proteins by hydrophobic interaction chromatography
by J. Plicka, P. Šmídl, I. Kleinmann and V. Svoboda (Prague, Czechoslovakia) (Received May 16th, 1990) 139

Determination of O-ethyl S-2-diisopropylaminoethyl methylphosphonothioate (VX) by thermospray liquid chromatography–mass spectrometry
by E. R. J. Wils and A. G. Hulst (Rijswijk, The Netherlands) (Received July 4th, 1990) . 151

Photochemical reaction coupled to solid-state peroxyoxalate chemiluminescence for the high-performance liquid chromatographic detection of compounds having weak chromophores
by I. Aichinger, G. Gübitz and J. W. Birks (Boulder, CO, U.S.A.) (Received August 30th, 1990) 163

On-line sample clean-up of fermentation broths and substrates prior to the liquid chromatographic separation of carbohydrates
by G. Marko-Varga, E. Dominguez, B. Hahn-Hägerdal and L. Gorton (Lund, Sweden) and H. Irth, G. J. de Jong, R. W. Frei and U. A. Th. Brinkman (Amsterdam, The Netherlands) (Received May 14th, 1990) 173

Analysis of N- and O-glycosidically bound sialooligosaccharides in glycoproteins by high-performance liquid chromatography with pulsed amperometric detection
by S. Honda, S. Suzuki, S. Zaiki and K. Kakehi (Higashi-osaka, Japan) (Received May 8th, 1990) 189

High-performance reversed-phase ion-pair chromatographic study of myo-inositol phosphates. Separation of myo-inositol phosphates, some common nucleotides and sugar phosphates
by M. Patthy, T. Balla and P. Arányi (Budapest, Hungary) (Received July 20th, 1990) . . 201

Controlling the retention of clopenthixol and other basic drug substances by reversed-phase ion-pair chromatography on bonded-phase materials using two counter-ions of opposite charge
by P. Helboe (Brønshøj, Denmark) (Received July 30th, 1990) 217

Chromatographic behaviour of aromatic acids in reversed-phase high-performance liquid chromatography
by B. Rittich and M. Pirochtová (Brno, Czechoslovakia) (Received June 21st, 1990) . . . 227

Liquid chromatographic determination of free and total fatty acids in milk and milk products as their 2-nitrophenylhydrazides
by H. Miwa and M. Yamamoto (Fukuoka, Japan) (Received July 23rd, 1990) 235

Separation of phenylamine- and naphthylaminesulphonic acids by reversed-phase high-performance liquid chromatography
by H. Zou, Y. Zhang, X. Wen and P. Lu (Dalian, China) (Received July 10th, 1990) . . . 247

Use of β-diketonate anions as eluent in non-suppressed ion chromatography. Acetylacetonate eluent for the separation of fluoride and chloride
by N. Hirayama, M. Maruo, A. Shiota and T. Kuwamoto (Kyoto, Japan) (Received July 27th, 1990) 257

Extraction and clean-up procedure for polychlorinated dibenzo-*p*-dioxins and dibenzofurans in fly ash from municipal solid waste incinerators
by B. Jiménez, M. J. González and L. M. Hernández (Madrid, Spain) (Received July 18th, 1990) 265

Gas chromatographic determination of airborne dialkyltin dichlorides as hydride derivatives
by S. Vainiotalo and L. Häyri (Helsinki, Finland) (Received August 9th, 1990) 273

Use of crown ethers in the isotachophoretic determination of metal ions
by K. Fukushi (Kobe, Japan) and K. Hiiro (Ube, Japan) (Received June 21st, 1990) . . . 281

Notes

Chromatographic behaviour of cyclodextrin complexes of nucleotides, nucleosides and their bases
by M. Seno, M. Lin and K. Iwamoto (Tokyo, Japan) (Received August 2nd, 1990) . . . 293

Chromatographic separation of β-substituted 3-(3,4-dihydroxyphenyl)alanine derivatives
by P. Camilleri, C. A. Dyke, C. Eckers and A. N. Shaw (Welwyn, U.K.) (Received September 13th, 1990) . . . 300

Determination of sterigmatocystin in fermentation broths by reversed-phase high-performance liquid chromatography using post-column fluorescence enhancement
by F. L. Neely and C. S. Emerson (Indianapolis, IN, U.S.A.) (Received September 18th, 1990) . . . 305

Isolation of a fibrinogen-converting enzyme ficozyme from the venom of *Bothrops asper* by one-step affinity chromatography on Blue Sepharose
by H. Fořtová, J. E. Dyr and J. Suttnar (Prague, Czechoslovakia) (Received July 9th, 1990) 312

High-performance liquid chromatographic enantioseparation of intermediates relating to the total synthesis of (−)-physostigmine
by T. B. K. Lee and G. S. K. Wong (Somerville, NJ, U.S.A.) (Received July 31st, 1990) . 317

Simultaneous determination of thimerosal and chlorhexidine in solutions for soft contact lenses and its applications in stability studies
by O. Y.-P. Hu, S.-Y. Wang, Y.-J. Fang, Y.-H. Chen and M.-L. King (Tapei, Taiwan) (Received July 25th, 1990) . . . 321

Author Index . . . 327

Erratum . . . 330

In articles with more than one author, the name of the author to whom correspondence should be addressed is indicated in the article heading by a 6-pointed asterisk (*)